private mem 1
private mem 2
private mem N
Header: pid's of processes sharing memory
SM1
Header: pid's of processes sharing memory
SM2
MAIN MEMORY
descriptive name/pid translation
LIBRARIES
PROCESSES
mmap_peer
munmap_peer
SYSTEM CODE
micro kernels

process 1

process 2

process N

data

program
code

FIG. 1A

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~~SERVER~~

SYSTEM
CODE

~~CLIENT~~

FIRST
PROCESS

server adds more
data to shared
table

ALLOCATE
ADDITIONAL
SHARED MEMORY

MAINTAIN ACCESS
INFORMATION IDENTIFYING
ALL CLIENT PROCESSES
HAVING ACCESS TO SHARED MEMORY

server accesses
PIDs of all clients
attached to shared
memory

IDENTIFY A SECOND
PROCESS HAVING
ACCESS TO SHARED
MEMORY

MAP ADDITIONAL
SHARED MEMORY
INTO ADDRESS SPACE
OF SECOND PROCESS

server uses
mmap_peer () to
map added shared
memory into address
space of all clients

USE PEER MAPPING
SYSTEM CALL TO
REQUEST MAPPING
ADDITIONAL SHARED
MEMORY INTO
ADDRESS SPACE
OF SECOND
PROCESS

OK
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Fig. 2